REPUBLIC OF THE MARSHALL ISLANDS

Maritime Administrator

MOUNT OLYMPUS CASUALTY INVESTIGATION REPORT

Local Pilot's Fatality

Tuapse, Russia | 30 December 2018

Official Number: 5292

IMO Number: 9260081

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AUTHORITY

An investigation under the authority of Republic of the Marshall Islands laws and regulations, including all international treaties, conventions and instruments to which the Republic of the Marshall Islands is a Party, was conducted to determine the cause of the casualty.

Maritime Administrator

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PART 1: EXECUTIVE SUMMARY

On 30 December 2018, the Republic of the Marshall Islands-registered oil/chemical tanker MOUNT OLYMPUS, managed by Systemar Ltd (the "Company") was departing the port of Tuapse, Russia to proceed to sea.

The Republic of the Marshall Islands Maritime Administrator (the "Administrator") was informed that while disembarking the ship and attempting to transfer from the pilot ladder to an escort tugboat in the early morning hours, the Pilot fell into the water between the ship and the tugboat.

The Pilot was recovered from the water by the tugboat crew after a short time but was later declared deceased.

The port authorities instructed the ship to wait in a local anchorage. Later the same day, MOUNT OLYMPUS was cleared to sail.

The Administrator's marine safety investigation determined that the causal factors for the Pilot's occupational fatality resulted from an accidental fall into the sea. This occurred while he attempted to transfer from MOUNT OLYMPUS' pilot ladder onto the tugboat's boarding platform in the dark during poor and deteriorating weather conditions.

According to the forensic report[1], the Pilot's death "occurred as a result of drowning in water."

The Administrator's investigation determined the causal factors that may have contributed to the fatality included:

1. poor decision making by both the Master and the Pilot;
2. not fully accounting for the deteriorating weather conditions; and
3. the Master improperly delegating the final decision-making to the Pilot.

1 Ministry of Health of the Russian Federation, Bureau of Forensic Medical Examination of the Krasnodar Territory, Tuapsin Branch – Forensic Examination Certificate No. 710/2018.

PART 2: FINDINGS OF FACT

The following Findings of Fact are based upon the information obtained during the Administrator's marine safety investigation.

1. Ship's particulars: *see* chart to right.

2. MOUNT OLYMPUS arrived outside Tuapse port (Russia) on 23 December 2018. Due to poor weather conditions the ship was instructed to remain drifting off port limits (OPL) awaiting an improvement in the weather. On 25 December 2018, in the afternoon, the weather had improved enough to permit the ship to enter the anchorage area close to the port entrance. The conditions were still not suitable for berthing.

3. On the afternoon of 28 December 2018, MOUNT OLYMPUS went to loading berth No. 2 and was safely moved alongside at 1724. Formalities were completed and cargo loading operations began at 2048 that evening.

4. Cargo operations finished at 1912 on 29 December 2018 and the cargo formalities completed at 2212. The ship waited for outward clearance from the port authorities, which was received at 0130 on 30 December 2018. MOUNT OLYMPUS' crew prepared for departure and awaited the Pilot's arrival.

5. MOUNT OLYMPUS's sailing trim was forward and aft drafts of 10.8 meters (m) (an even keel), and the ship fully upright with zero list to either side. The freeboard height was recorded as 6.1 m.

6. The Pilot boarded MOUNT OLYMPUS from the jetty on the starboard side at 0418. The weather conditions recorded in the Bridge Log Book at 0400, were wind Beaufort Force 5 from the southwest, sea state 4, indicated wind speeds of 18.5-22 knots, and wave heights up to 2 m.

7. The Company's Master/Pilot Information Exchange and Pilotage Information forms were completed and signed by the Pilot and the Master.

8. Two tugboats, KAPITAN AVDYUKOV and SD RANGER, were secured to the ship's port side, and the crew began casting off the mooring lines at 0424. All lines were cleared at 0436.

SHIP PARTICULARS

Ship Name
MOUNT OLYMPUS

Registered Owner
Garland Enterprises Ltd

ISM Ship Management
Systemar Ltd

Flag State
Republic of the Marshall Islands

IMO No.	Official No.	Call Sign
9260081	5292	V7CN9

Length x Breadth x Depth
173.8 x 27.4 x 16.9 meters

Year of Build	Gross Tonnage
2003	22,515

Net Tonnage	Deadweight Tonnage
11,314	39,816

Ship Type
Oil/Chemical Tanker

Document of Compliance Recognized Organization
Russian Maritime Register of Shipping

Safety Management Certificate Recognized Organization
Russian Maritime Register of Shipping

Classification Society
American Bureau of Shipping

Persons on Board
26

9. The pilot ladder was rigged on the port side ready for the Pilot's departure after the short transit out of the port. According to the available statements, the ladder rigging followed the International Convention for the Safety of Life at Sea (SOLAS) regulations, and the International Maritime Organization's (IMO's) required boarding arrangements for Pilots for freeboards of 9 m or less *(see Figure 1)*.

10. The Company's "Embarkation/Disembarkation of Pilot" checklist form MAROPS-09 was completed and signed by the Pilot, Master, and Fourth Officer (4/O), who was the duty officer. The Second Officer (2/O) checked the rigging.

11. The officers' statements said the Pilot instructed that the ladder's bottom step be set at 4.5 m above the waterline due to the tugboat's deck height. According to the local authority's investigation report, the tug's Master verified this ladder setting as suitable for the prevailing weather conditions.

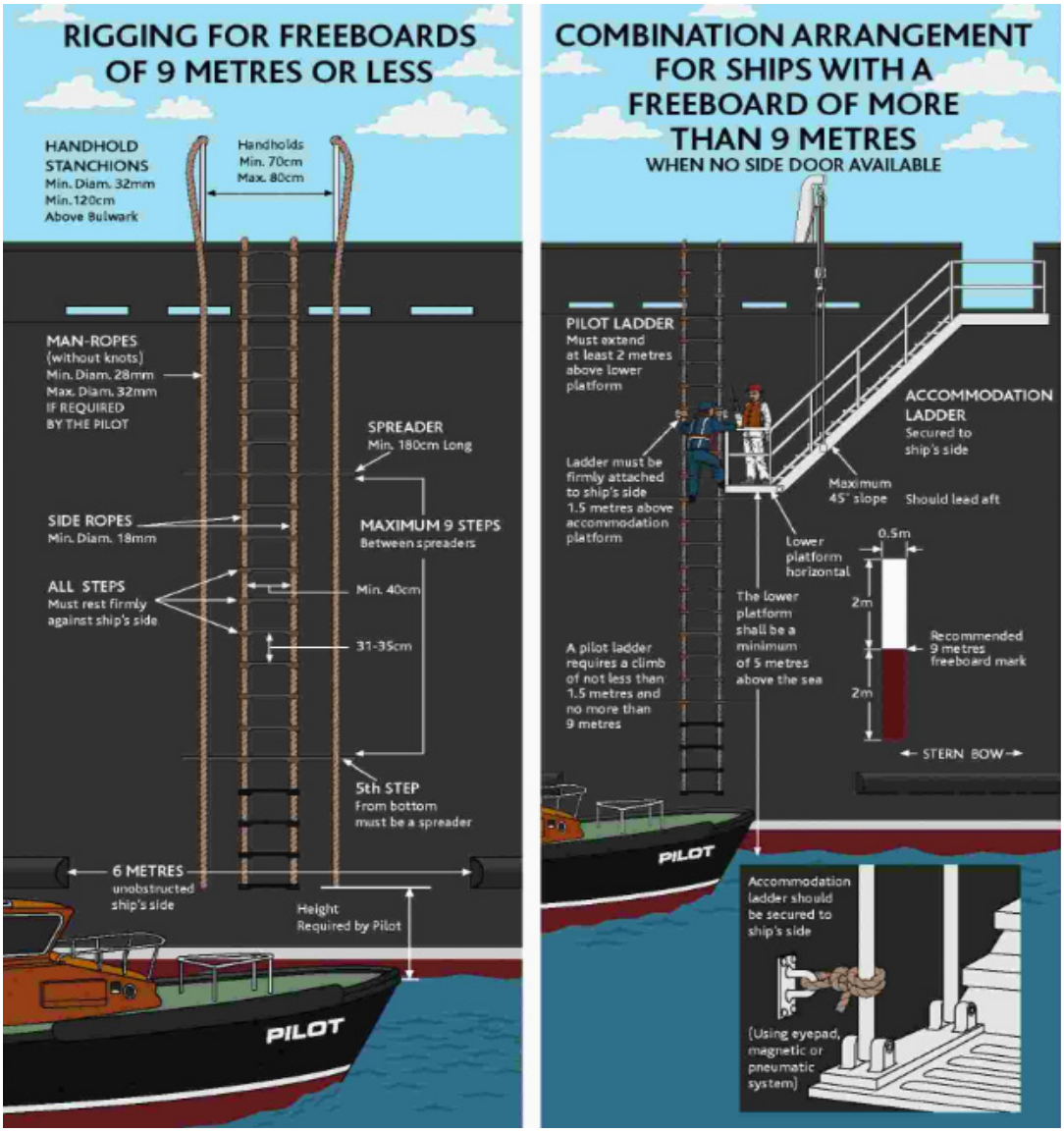

Figure 1: Boarding arrangements for Pilots.

12. The pilot ladder in use was new and had a manufacturing date of October 2018 *(see Figure 2)*. It was supplied to MOUNT OLYMPUS during the recent Special Survey and drydocking period in Turkey from 20 November 2018 to 5 December 2018. MOUNT OLYMPUS completed the third Special Survey and was issued with new Classification certificates on 5 December 2018. The Company's "Monthly Inspection of Pilot Ladders" report form completed by the Chief Officer (C/O) on 25 December 2018 noted no defects.

Figure 2: Pilot ladder manufacturer's information plate.

13. At approximately 0500, once clear of the port, the tugboats let go from MOUNT OLYMPUS. The Pilot left the Bridge going to the pilot embarkation area. A video recording[2] shows him leaving the Bridge wearing an inflatable life jacket over his weatherproof coat. According to the local authority investigation report, he was wearing a Sigma 150N life jacket, manufactured by Lalizaz Hellas, S.A., which self-inflates on entering the water.

14. The prevailing weather conditions had deteriorated. At 0500, they were recorded in the Bridge Log Book as Beaufort Force 6 from the southeast, with a sea state of 5, indicating wind speeds of 22-26 knots and wave height up to 3 m. The outside air temperature was recorded as 8° Celsius (C), with a sea temperature of 13° C.

15. According to the Master, while MOUNT OLYMPUS was fully laden and stable in the water with very little rolling motion, the weather conditions were discussed with the Pilot. Specifically, they discussed whether it would be better to rig the pilot ladder on the starboard side, as the wave direction was coming from the port side. The Pilot's preferred option, however, was the port side where the ladder had already been prepared. The Master commented that immediately prior to boarding MOUNT OLYMPUS, the Pilot had brought another ship into port and would have been aware of the wind and sea conditions outside the port entrance. They also discussed the option of changing MOUNT OLYMPUS' course to provide greater protection from the wind and waves, as the Master felt that altering the ship more to port may afford better protection, but the Pilot instructed the Master to maintain a course of 120 and minimum safe steering speed of 4 knots.

2 Video recording and Voyage Data Recorder (VDR) evidence provided by ship management.

16. The Pilot was escorted to the embarkation area by the 4/O and they were met by the 2/O, an Able Seafarer Deck (ASD), and two Ordinary Seafarers (OSs). The 4/O and Pilot both checked again to ensure that the pilot ladder was properly rigged. The tugboat KAPITAN AVDYUKOV approached the ship, and the Pilot began descending the ladder. According to the local authority's investigation report, the pilot ladder was well lit by searchlights from both the ship and the tugboat.

17. The KAPITAN AVDYUKOV is a harbor tugboat of 441 gross tons (GT) with a length of 26.17 m, breadth of 12.6 m, and moulded depth of 5.3 m. The tugboat had a crew of five, and the pilot boarding arrangement consisted of a portable platform with handrails and four steps secured to the deck of the tugboat *(see Figure 3)*.[3]

Figure 3: Pilot embarkation platform on KAPITAN AVDYUKOV.

18. At approximately 0510, the Master was standing on the portside bridge wing monitoring the Pilot's disembarkation when he saw the Pilot fall; the 4/O immediately shouted that the Pilot had fallen into the water.

19. According to the statements provided by the Master and 4/O, who witnessed the fall from their different vantage points, the Pilot had at least one foot on the tugboat, but still had a hand hold on the pilot ladder, and the tug crew were assisting him aboard. At that time, a large wave forced the tugboat away from

3 Tugboat details and photo taken from Russian Federation investigation documents received by the Administrator.

MOUNT OLYMPUS' side. The Pilot lost his balance and fell into the water. However, the local investigation report states that the Pilot did not step on to the tugboat platform, but was hanging from the pilot ladder by his left arm and fell directly into the water between the tugboat and the ship.

20. An OS immediately threw a lifebuoy with light into the water and the Master ordered the main engine to be stopped and initiated a rudder maneuver to swing the MOUNT OLYMPUS' stern away from where the Pilot had fallen. The Master also told the port authority of the incident via Very High Frequency (VHF) radio.

21. The Master instructed all available crewmembers to look out for the Pilot, using the ship's searchlights. The tugboat turned to try to locate the Pilot.

22. According to the local investigation report, approximately one to two minutes after the Pilot fell, the deck officer of the tugboat heard calls for help from the Pilot on VHF channel 69 saying "Help, I'm drowning."

23. At 0527, the tugboat Captain informed Tuapse Traffic Control on VHF channel 10 that the Pilot had been located and retrieved unconscious from the water. According to the local investigation report, when the Pilot was lifted out of the water, the life jacket he was wearing was not inflated. This was verified by several members of the tugboat crew. The life jacket was later inspected by the makers and was found to be damaged and not suitable for use. It was manufactured in May 2016 and had not undergone any annual servicing up to the date of the incident.

24. At 0530, the local traffic control instructed the Master to proceed to anchorage number 418, position N25. The ship was safely anchored at 0606, and the main engine placed on 15 minutes readiness.

25. According to the local investigation report, the tugboat moored alongside dock No. 1 at 0536, and paramedics arrived on the scene at 0550. At 0600, the paramedics confirmed the Pilot deceased.

26. While maneuvering to the anchorage location, the Master also informed the Company's designated person ashore (DPA) at 0542 of the incident. Later during the morning (time not specified), MOUNT OLYMPUS' agents informed the Master that the Pilot had passed away. The Company's DPA informed the Administrator by email on the same day.

27. At 1610, the Master received clearance from the port authority to proceed on his voyage to Agio Theodoroi, Greece. The crew began heaving the anchor at 1700 and MOUNT OLYMPUS cleared the anchorage area and commenced the sea passage at 1724.

Experience Of Master And Pilot

28. At the time of the incident the Master had been in the rank for nine years and had been with the Company for over 14 years. He had been on board the MOUNT OLYMPUS for two months.

29. The Pilot was a 54-year-old male and a former Master with 33 years' experience at sea, and three years, 11 months experience as a pilot. He had close to 19 hours of rest in the previous 24 hours prior to boarding the ship.[4]

4 Information taken from Russian Federation investigation document "Casualty Analysis Data" submitted to the Administrator by email on 6 February 2019.

PART 3: ANALYSIS

The following Analysis is based on the above Findings of Fact.

The circumstances leading up to the Pilot's accident appear to have been routine and in line with standard operating procedures, with all documentation prepared and duly signed. It is apparent from the available records that the weather conditions during the period from the MOUNT OLYMPUS' arrival OPL to final departure were poor. It is not known if there was a commercial urgency or pressure from the port authority for the MOUNT OLYMPUS to vacate the berth.

The crew had prepared the pilot ladder following all statutory regulations. At the Pilot's request, it was positioned at the 4.5 m height from the waterline. The Pilot fully agreed with the arrangement and signed the Company checklist accordingly. The pilot ladder was new and in good condition and is discounted as having any bearing on the incident.

The MOUNT OLYMPUS was fully laden on an even keel with a 10.8 m draft forward and aft and was fully upright with no listing to either side. There was minimal rolling motion, so the ship's sailing condition had no adverse effect on the vertical pilot ladder's position against the hull.

The fact that the Master, Pilot, and tug masters did discuss the weather conditions and pilot disembarkation arrangement during the outward passage is an indication that there was some concern with the prevailing conditions. It appears from the statements given that the Pilot made the final decision on the pilot ladder position and the MOUNT OLYMPUS' course and speed, before proceeding to disembark the ship and attempt to transfer to the tugboat.

The Pilot had brought another ship into the port immediately prior to going on board MOUNT OLYMPUS and was aware of the weather and sea conditions outside the port entrance at that time. Log Book entries indicate that the weather conditions had been deteriorating from the time he boarded the ship, and so he may not have been fully aware of the current sea state when he decided to disembark.

The Pilot had almost 19 hours of rest in the previous 24 hours prior to boarding MOUNT OLYMPUS, so it appears that fatigue was not a contributory factor in this incident.

As shown in video footage submitted from the Company, the Pilot was wearing proper weatherproof clothing and an inflatable lifejacket when he left the Bridge going to the pilot ladder.

The information recorded in the Bridge Log Book at 0500 indicated deteriorating weather conditions. Wind speeds and wave heights increased compared to those recorded at 0400. The outside air temperature was 8° C and there would have been a significant wind-chill factor.

Visibility may have been a contributing factor as the incident occurred during darkness hours. These conditions may have adversely affected the Pilot's judgement when he attempted to transfer from the pilot ladder to the tug.

The KAPITAN AVDYUKOV is a harbor tug of 441 GT, larger than an average-sized pilot boat, but it was still susceptible to unpredictable movement in the sea conditions. During the transfer, both the Master and 4/O said they saw a large wave forcing the tugboat away from the MOUNT OLYMPUS as the Pilot tried to get on board. This contradicts the local investigation report, which states the tugboat crew saw the Pilot hanging from the ladder with only his left arm, before falling directly into the sea.

PART 4: CONCLUSIONS

The following Conclusions are based on the above Findings of Fact and Analysis and shall in no way create a presumption of blame or apportion liability.

The causal factors that contributed to the Pilot's accidental fall into the sea and subsequent fatality while attempting to transfer from MOUNT OLYMPUS' pilot ladder to the deck of the tugboat KAPITAN AVDYUKOV include:

1. improper assessment of risk and decision making by the Pilot and Master by not fully accounting for the deteriorating weather conditions;
2. improper delegation by the Master to the Pilot of the decision-making process;
3. failure by the Pilot to fully take into consideration the Master's concerns and recommendations regarding the sea conditions and pilot ladder position;
4. poor and deteriorating weather conditions causing random and unpredictable motions of the tugboat; and
5. failure of the Pilot's self-inflating life jacket to properly inflate on entering the water.

The causal factors that may have contributed to the incident include:

1. darkness and poor or restricted visibility near the Pilot's transfer position; and
2. failure to wait until the weather and lighting conditions had improved sufficiently to permit safe transfer to the tugboat.

Additional issues that were investigated but were determined to not have contributed to the incident include:

1. compliance with work and rest hours; and
2. experience of the Pilot and the ship's crew.

PART 5: PREVENTIVE ACTIONS

The Company conducted an internal safety meeting to review the circumstances leading up to the incident in order to determine what might have been done to prevent it and what Preventive Actions could be put in place in the future.

Based on this review, the Company:

1. shared details of the incident throughout its managed fleet; and

2. Masters were instructed to verbally remind Pilots in the region about the incident with the intent that prevailing conditions be given more careful consideration.

The Administrator concurs with these Preventive Actions.

The Federal Transport Inspection Service of the Directorate for State of Maritime and River Supervision in the Russian Federation conducted their own investigation into the incident and have put in place their own Preventive Actions to include:

1. ensuring that pilot boarding arrangements onto pilot boats and tugboats are fully compliant with SOLAS Chapter V, Regulation 23.4.2, and paragraph 5.2 of IMO Resolution A.1045(27);
2. not permitting Pilots to use inflatable life jackets without annual inspection and maintenance being carried out at certified service stations;
3. checking the status of inflatable life jackets being used by Pilots;
4. conducting unscheduled training for Pilots of the Pilot Service on observing safety requirements; and
5. circulating to other Pilots the circumstances surrounding this incident.

The Administrator concurs with these Preventive Actions.

PART 6: RECOMMENDATIONS

The following Recommendations are based on the above Conclusions and in consideration of the Preventive Actions taken.

The Company utilizes this incident as a factual case study in future Bridge Team Management courses and senior crew seminars. It is further recommended that emphasis be given to:

1. reinforcing the Master's overriding authority and responsibility to make decisions with respect to safety;
2. the Company's expectations regarding how Masters should exercise their overriding authority and responsibility during pilotage operations; and
3. the Company's expectations regarding how other members of the Bridge Team should best support the Master and Pilot.

The Administrator's marine safety investigation is closed. It will be reopened if additional information is received that would warrant further review.